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and reduce a level of non-uniformity of the non-uniform surface, the halogen-containing-etching species including HCl.

REMARKS

Claims 1-22 are pending. Claims 1, 5, 11, and 12 have been amended to correct informalities. New claims 19-22 have been added. No new matter has been added.

Applicants do not believe the present application includes any new matter from its parent application, Application No. 09/295,858, filed on April 21, 1999, now U.S. Patent No. 6,171,965. Accordingly, the first paragraph on the first page has been amended to indicate that the present application is a continuation application, not a continuation-in-part application.

Applicants note that the Examiner has objected to the disclosure for informalities. The Examiner did not identified the informalities. Applicants respectfully submit that the disclosure is in condition for allowance to the best of Applicants' knowledge.

Claims 1-18 were rejected under 35 USC § 103 (a) as being unpatentable over Sato et al. Applicants respectfully traverse the rejection. Claim 1 recites, among other features, "applying a combination of a deposition species for deposition of a deposition material and an etching species for etching an etchable material, the combination of the deposition species and the etching species contacting the non-uniform surface in a thermal setting to reduce a level of non-uniformity of the non-uniform surface by filling a portion of the defects to smooth the film of material..."

Sato et al. does not disclose or teach at least the above recited features. Sato et al. is directed to eliminating roughness of a semiconductor substrate by heat treating the substrate in a reducing environment (Abstract). That is, the substrate is placed in a hydrogen environment or hydrogen containing environment to flatten the substrate (col. 8, lines 8-47). Sato does not disclose applying a combination of a deposition species and an etching species to the non-uniform surface in a thermal setting

to reduce a level of non-uniformity of the non-uniform surface, as recited in claim 1. In fact, Sate does not appear to disclose applying either a deposition species or an etching species to the non-uniform surface. Therefore, claim 1 and its dependent claims are allowable for at least the reasons set forth above.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

On page 1, please replace the first paragraph with the following paragraph:

-- The present invention is a continuation [continuation in part] of and claims priority to U.S. Application No. 09/295,858 filed April 21, 1999, now U.S. Patent No. 6,171,965 [(Attorney Docket No. 18419-008200)], commonly assigned and hereby incorporated by reference for all purposes. --

IN THE CLAIMS:

The claims have amended as indicated below:

1. (Amended) A method of fabricating substrates, the method comprising
providing a substrate comprising a film of material characterized by a non-uniform surface, the non-uniform surface including a plurality of defects, at least some of the defects being of a size ranging from about 100 Angstroms and greater; and
applying a combination of a deposition species for deposition of a deposition material and an etching species for etching an etchable material, the combination of the deposition species and the etching species contacting the non-uniform surface in a thermal setting to reduce a level of non-uniformity of the non-uniform surface by filling a portion of the defects to smooth the film of material, the film of material being substantially free from the defects and being characterized by a surface roughness of a predetermined value.
5. (Amended) The method of claim 1 wherein said non-uniform surface comprises a plurality of particles therein, the particles comprising a hydrogen bearing species.

11. (Amended) The method of claim 1 wherein said etching species comprise [comprising] a halogen bearing compound [is selected from at least Cl₂, HCl, HBr, HI, and HF].

12. (Amended) The method of claim 1 wherein said etching [etchanting] species comprise a fluorine bearing compound.

The following new claims have been added:

-- 19. (New) The method of claim 1, wherein the substrate is a silicon substrate having (100) crystal orientation. *new method*

20. (New) A method of fabricating substrates, the method comprising providing a substrate comprising a film of material with a non-uniform surface, the non-uniform surface including a plurality of defects, at least some of the defects being 100 Angstroms or greater; and

applying simultaneously to the non-uniform surface a combination of a silicon-containing-deposition species for deposition of a deposition material and a halogen-containing-etching species for etching an etchable material in order to smooth the surface.

21. (New) The method of claim 20, wherein the combination of the deposition species and the etching species are contacting the non-uniform surface in a thermal setting of a temperature of about 1,000 degrees Celsius or greater. *claim 2 not different*

22. (New) A method of fabricating substrates, the method comprising providing a silicon substrate comprising a film of material with a non-uniform surface, the non-uniform surface including a plurality of defects, at least some of the defects being 100 Angstroms or greater, the silicon substrate having (100) crystal *claim 1*

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orientation, the non-uniform surface including particles derived from hydrogen gas during an implantation process; and

applying simultaneously to the non-uniform surface a combination of a silicon-containing-deposition species for deposition of a deposition material and a halogen-containing-etching species for etching an etchable material in order to smooth and reduce a level of non-uniformity of the non-uniform surface, the halogen-containing-etching species including HCl. --

Claim
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